What is claimed is:

1. An apparatus for processing image signals acquired by scanning an image, recorded on a recording medium, with an image reading light, said apparatus comprising:

a defect-detecting signal generating section to scan said image with a defect detecting light, so as to generate defect detecting signals, which can be employed for detecting a defect of said image;

a converting section to apply a multiple-resolution conversion processing to said defect detecting signals, generated by said defect-detecting signal generating section, so as to decompose said defect detecting signals into multiple-resolution signal components; and

a recognizing section to recognize a presence or absence of said defect in said image, based on said multiple-resolution signal components decomposed by said converting section.

2. The apparatus of claim 1,

wherein said multiple-resolution conversion processing is a Dyadic Wavelet transform, and said multiple-resolution

signal components include at least a high frequency band component.

3. The apparatus of claim 2,

wherein said converting section applies said Dyadic Wavelet transform of at least two levels to said defect detecting signals; and

wherein said recognizing section recognizes said presence or absence of said defect in said image by comparing signal intensities of high frequency band components corresponding to at least two levels with respect to a specific pixel, among high frequency band components of every level acquired by applying said Dyadic Wavelet transform.

4. The apparatus of claim 1, further comprising:

a compensating section to compensate for said defect of said image recognized by said recognizing section.

5. A method for processing image signals acquired by scanning an image, recorded on a recording medium, with an image reading light, said method comprising the steps of:

scanning said image with a defect detecting light, so as to generate defect detecting signals, which can be employed for detecting a defect of said image;

applying a multiple-resolution conversion processing to said defect detecting signals, generated in said scanning step, so as to decompose said defect detecting signals into multiple-resolution signal components; and

recognizing a presence or absence of said defect in said image, based on said multiple-resolution signal components decomposed in said applying step.

6. The method of claim 5,

wherein said multiple-resolution conversion processing is a Dyadic Wavelet transform, and said multiple-resolution signal components include at least a high frequency band component.

7. The method of claim 6,

wherein said Dyadic Wavelet transform of at least two levels is applied to said defect detecting signals in said applying step; and

wherein, in said recognizing step, said presence or absence of said defect in said image is recognized by

comparing signal intensities of high frequency band components corresponding to at least two levels with respect to a specific pixel, among high frequency band components of every level acquired by applying said Dyadic Wavelet transform.

8. The method of claim 5, further comprising the step of:

compensating for said defect of said image, recognized in said recognizing step.

9. A computer program for executing operations for processing image signals acquired by scanning an image, recorded on a recording medium, with an image reading light, said computer program comprising the functional steps of:

scanning said image with a defect detecting light, so as to generate defect detecting signals, which can be employed for detecting a defect of said image;

applying a multiple-resolution conversion processing to said defect detecting signals, generated in said scanning step, so as to decompose said defect detecting signals into multiple-resolution signal components; and

recognizing a presence or absence of said defect in said image, based on said multiple-resolution signal components decomposed in said applying step.

10. The computer program of claim 9,

wherein said multiple-resolution conversion processing is a Dyadic Wavelet transform, and said multiple-resolution signal components include at least a high frequency band component.

11. The computer program of claim 10,

wherein said Dyadic Wavelet transform of at least two levels is applied to said defect detecting signals in said applying step; and

wherein, in said recognizing step, said presence or absence of said defect in said image is recognized by comparing signal intensities of high frequency band components corresponding to at least two levels with respect to a specific pixel, among high frequency band components of every level acquired by applying said Dyadic Wavelet transform.

12. The computer program of claim 9, further comprising the functional step of:

compensating for said defect of said image, recognized in said recognizing step.

13. An apparatus for outputting a reproduced image, comprising:

an image-processing section to process image signals acquired by scanning an image, recorded on a recording medium, with an image reading light; and

an image-recording section to record said reproduced image onto a outputting medium, based on processed image signals acquired by processing said image signals in said image-processing section;

wherein said image-processing section includes:

a defect-detecting signal generating section to scan said image with a defect detecting light, so as to generate defect detecting signals, which can be employed for detecting a defect of said image;

a converting section to apply a multiple-resolution conversion processing to said defect detecting signals, generated by said defect-detecting signal generating

section, so as to decompose said defect detecting signals into multiple-resolution signal components; and

a recognizing section to recognize a presence or absence of said defect in said image, based on said multiple-resolution signal components decomposed by said converting section.

14. The apparatus of claim 13,

wherein said multiple-resolution conversion processing is a Dyadic Wavelet transform, and said multiple-resolution signal components include at least a high frequency band component.

15. The apparatus of claim 14,

wherein said converting section applies said Dyadic Wavelet transform of at least two levels to said defect detecting signals; and

wherein said recognizing section recognizes said presence or absence of said defect in said image by comparing signal intensities of high frequency band components corresponding to at least two levels with respect to a specific pixel, among high frequency band components of every level acquired by applying said Dyadic Wavelet transform.

16. The apparatus of claim 13,

wherein said image-processing section further includes:

a compensating section to compensate for said defect of said image recognized by said recognizing section.